REMARKS/ARGUMENTS

In the Office Action mailed May 12, 2008, claims 1-13 are rejected. Additionally, the specification is objected to. In response, claims 1, 2 and 4-13 have been amended. Additionally, claims 14-16 have been added and claim 3 has been canceled. Applicants hereby request reconsideration of the application in view of the amendments, the new claims, and the below-provided remarks.

Objections to the Specification

The abstract of the disclosure is objected to because the abstract of the disclosure does not commence on a separate sheet in accordance with 37 C.F.R. §1.52(b)(4). In response, the abstract of the disclosure is provided on a separate sheet. Additionally, the abstract has been amended to remove reference numbers.

The specification is objected to because various sections of the specification are not labeled with the appropriate section heading. Applicants note that the section headings are not required in the guidelines set forth in the MPEP 608.01(a) and, hence, Applicants respectfully decline to amend the specification to include the indicated section headings.

Thus, Applicants respectfully request that the objections to the specification be withdrawn.

Priority

The Office Action states that a copy of the International Application (PCT/IB03/04352) has not been received for this Application as required under 35 U.S.C. §371. Applicants note that a copy of the International Application (PCT/IB03/04352) and a copy of the foreign priority Application (02079389.9) have been received on April 19, 2005, according to the USPTO Patent Application Information Retrieval (PAIR) system. Applicants further note that in the International Application (PCT/IB03/04352), the United States (US) is one of the designated states. Accordingly, a copy of the International Application (PCT/IB03/04352) should have been received by the USPTO.

Claim Rejections under 35 U.S.C. 102 and 103

Claims 1, 3, 4 and 10-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Yang et al (U.S. Pat. No. 7,042,512, hereafter "Yang"). Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang in view of Keating et al. (U.S. Pat. 5, 162,907, hereafter "Keating"). Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yang in view of Hackett et al. (U.S. Pat. 5,642,170, hereafter "Hackett"). Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yang in view of Keating and further in view of De Haan et al. (U.S. Pat. 5,929,919, hereafter "De Haan"). Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang in view of De Haan. However, Applicants respectfully submit that the pending claims are patentable over Yang, Keating, Hackett and De Haan for the reasons provided below.

Independent Claims 1 and 13

Claim 1 has been amended to include all the limitation of claim 3 and to remove reference numbers. Claim 3 has been canceled. As amended, claim 1 recites in part that "*the interpolation unit is arranged to perform a motion compensated interpolation of the pixel values of the input images on basis of the motion vector field, if the value of the quality measure is lower than a predetermined threshold and is arranged to perform an alternative interpolation of the pixel values of the input images, if the value of the quality measure is higher than the predetermined threshold*" (emphasis added).

The Office Action on pages 5 and 6 states that Yang discloses the above-identified limitation of amended claim 1. However, Applicants respectfully assert that Yang does not disclose the above-identified limitation of amended claim 1. Furthermore, Applicants respectfully assert that Yang discloses the opposite of the above-identified limitation of amended claim 1.

In particular, Yang discloses that when the motion type of a block in a field to be interpolated is global motion, local motion, or zero motion and when the accuracy of the motion of the block exceeds a predetermined threshold, pixels generated according to motion compensated interpolation are selected as the interpolated pixels (see column 6, lines 1-32). Yang also discloses that when the motion type of a block in a field to be

interpolated is global motion, local motion, or zero motion and when the accuracy of the motion of the block is less than the predetermined threshold, pixels generated according to spatio-temporal interpolation are selected as the interpolated pixels (see column 6, lines 1-32). That is, Yang discloses that the motion compensated interpolation is performed when the accuracy of the motion of the block exceeds a predetermined threshold and the spatio-temporal interpolation is performed when the accuracy of the motion of the block is less than the predetermined threshold. On the contrary, amended claim 1 involves performing a motion compensated interpolation when the value of the quality measure is lower than a predetermined threshold and performing an alternative interpolation when the value of the quality measure is higher than the predetermined threshold. Accordingly, Yang discloses the opposite of the above-identified limitation of amended claim 1.

Because Yang does not disclose that "*the interpolation unit is arranged to perform a motion compensated interpolation of the pixel values of the input images on basis of the motion vector field, if the value of the quality measure is lower than a predetermined threshold and is arranged to perform an alternative interpolation of the pixel values of the input images, if the value of the quality measure is higher than the predetermined threshold,*" as recited in amended claim 1, Applicants respectfully submit that the independent claim 1 is not anticipated by Yang.

Claim 13 has been amended to include the limitations of claim 3. As amended, claim 13 includes similar limitations to claim 1. Because of the similarities between claim 13 and claim 1, Applicants respectfully assert that the remarks provided above with regard to claim 1 apply also to claim 13. Accordingly, Applicants respectfully submit that the independent claim 13 is not anticipated by Yang.

Dependent Claims 2 and 4-12

Claims 2 and 4-12 have been amended to remove reference numbers. Claims 2 and 4-12 depend from and incorporate all of the limitations of the independent claim 1. Thus, Applicants respectfully assert that claims 2 and 4-12 are allowable at least based on an allowable claim 1.

New claims 14-16

New claims 14-16 have been added. Support for claim 14 is found in Applicants' specification at, for example, original claim 9 and page 8, lines 3-6. Support for claims 15 and 16 is found in Applicants' specification at, for example, original claim 1, equation (6), page 6, lines 6-10 and the paragraph between page 9 line 31 and page 10 line 2.

New claim 14 depends from and incorporates all of the limitations of independent claim 1. Thus, Applicants respectfully assert that claim 14 is allowable at least based on an allowable claim 1. Additionally, claim 14 is allowable for further reasons, as described below.

Claim 14 recites that "*the value of the adaptive threshold is relatively high when the match errors being computed for the first and second motion vectors are relatively low*." De Haan is cited for teaching the limitations of claims 8 and 9. Applicants respectfully submit that De Haan fails to teach the above-identified limitation of claim 14. In particular, De Haan teaches that a fall-back detection circuit (40) is coupled to a motion estimator (30) to receive an error signal "Err" indicative of the consistency in the motion vector field, the estimation match errors, or some other information useful for determining the reliability of the estimated motion vectors (see Fig. 4 and column 4, lines 22-32). De Haan also teaches that the fall-back detection circuit "40" determines whether the error signal "Err" deviates seriously enough from acceptable values. However, De Haan fails to teach that the acceptable values are relatively high when the match errors are relatively low.

Claim 15 recites in part that "*the quality measurement unit is arranged to compute the value of the quality measure on basis of the maximum of the differences between the motion vectors*" (emphasis added). Applicants respectfully assert that Yang does not disclose the above-identified limitation of claim 1. In particular, Yang discloses that when the magnitude of a motion vector in a block in a field to be interpolated is at least a predetermined value, the motion vector of the block is compared with a global motion vector obtained from a current scene, where the motion vector with the most occurrences is used as the global motion vector. However, Yang does not disclose that the motion vectors of the field to be interpolated are compared and the maximum of the differences between the motion vectors is obtained. Accordingly, Yang does not disclose

"*the quality measurement unit is arranged to compute the value of the quality measure on basis of the maximum of the differences between the motion vectors,*" as recited in claim 15. Thus, Applicants respectfully assert that new claim 15 is not anticipated by Yang.

New claim 16 depends from and incorporates all of the limitations of independent claim 15. Thus, Applicants respectfully assert that claim 16 is allowable at least based on an allowable claim 15.

CONCLUSION

Applicants respectfully request reconsideration of the claims in view of the amendments, the new claims, and remarks made herein. A notice of allowance is earnestly solicited.

Respectfully submitted,

/mark a. wilson/

Date: February 19, 2009

Mark A. Wilson
Reg. No. 43,994

Wilson & Ham
PMB: 348
2530 Berryessa Road
San Jose, CA 95132
Phone: (925) 249-1300
Fax: (925) 249-0111